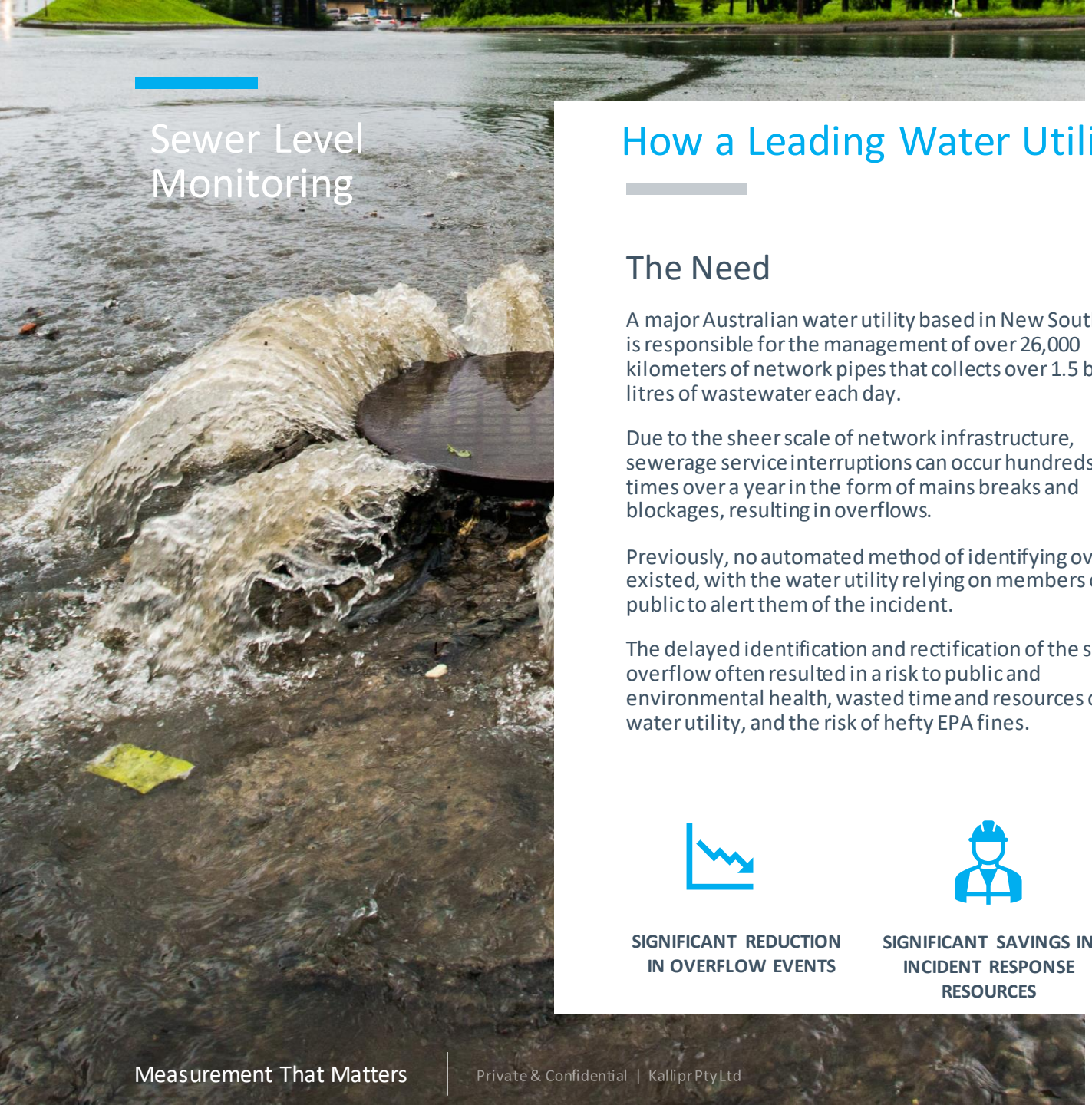

Sewer Level Monitoring

How a Leading Water Utility Reduced Overflow Events

The Need

A major Australian water utility based in New South Wales is responsible for the management of over 26,000 kilometers of network pipes that collects over 1.5 billion litres of wastewater each day.

Due to the sheer scale of network infrastructure, sewerage service interruptions can occur hundreds of times over a year in the form of mains breaks and blockages, resulting in overflows.

Previously, no automated method of identifying overflows existed, with the water utility relying on members of the public to alert them of the incident.

The delayed identification and rectification of the sewage overflow often resulted in a risk to public and environmental health, wasted time and resources of the water utility, and the risk of hefty EPA fines.

SIGNIFICANT REDUCTION IN OVERFLOW EVENTS

SIGNIFICANT SAVINGS IN INCIDENT RESPONSE RESOURCES

The Solution

The Captis solution was implemented by the water utility to proactively manage sewage overflows through localised monitoring of sewer risers, introducing the ability to identify issues before an overflow can occur.

A fleet of 8,000+ Captis devices (including Captis Pulse Lite EA and Captis Multi) were deployed to the sewer network and were configured to log and send data daily, in addition to immediate alerts on high level sewer events. The Captis on-board alarm processing allows for configurable signal debounce to prevent false triggers as well as immediate transmission on events. Additionally, the broken wire input is used to detect disconnection or damage of the float switch high-level sensor.

Following the implementation of the Captis solution, the end-user gained real-time data to assist in the identification of potential sewer overflows, allowing for the proactive resolution of network issues and a substantial reduction in overflow events.

As a result, everyday operations are optimised with less network interruptions and risk to public and environmental health is decreased, representing improved compliance to EPA regulations.

The sensors detect about 20 blockages in the gravity wastewater network per month on average, saving approximately $400,000 in incident costs.

The utility is now scaling to monitor their full fleet with an additional 15,000 Captis devices being deployed.

kallipr. IoT Technologies

Solution & Application

Captis Pulse Lite

Captis Pulse Lites were installed across existing infrastructure, with data feeding back daily

Captis Device

The cost-effective device was chosen thanks to its long battery life and its ease of installation on existing infrastructure

Remote Access

The NB-IoT cellular technology enabled data to be transmitted from any location easily and reliably, including down a sewer pit

Rugged Hardware

The IP68 rated enclosure can withstand extreme temperatures, weather events and water ingress

Multi Sensor Interface

Chosen for its multi sensor interface that can connect to existing infrastructure and flow sensors at the same time

Data Logging with Captis Cloud

Data logged in a central hub with pre-defined rules and alarms to ensure real-time data and accuracy